



Catalyst action of IAHH for SDG6 implementation at scientific, professional and societal levels

Session 5: Improve knowledge, management and protection of groundwater



Presenter: Marco Petitta (vice-President)

International Association of Hydrogeologists

Co-author: Natalia Vinograd



0. Role of International Association of Hydrogeologists

- The IAH, a worldwide scientific and educational charitable organization dealing with groundwater resource planning, management and protection, can be considered as a catalyst to highlight groundwater role in the implementation of SDG6
- Groundwater is a fundamental component for the achievement of SDG6 objectives, as testified by the 2022 theme of the World Water Day: “Groundwater: making the invisible visible”

The United Nations World Water Development Report 2022

GROUNDWATER Making the invisible visible



- SDG Targets 6.3, 6.4, 6.5 and 6.6 (not to mention the obvious 6.1) are associated with indicators where groundwater is still partially invisible, requiring additional efforts to be explicitly considered mainly in the “resource-oriented” Targets.
- IAH actions intend to contribute to the enhancement of groundwater perception for total SDG6 Targets implementation, addressing our messages to different categories of people: scientists, practitioners, stakeholders/users, and to the society





1. Description of the initiative: Sao Paulo-Brussels declaration

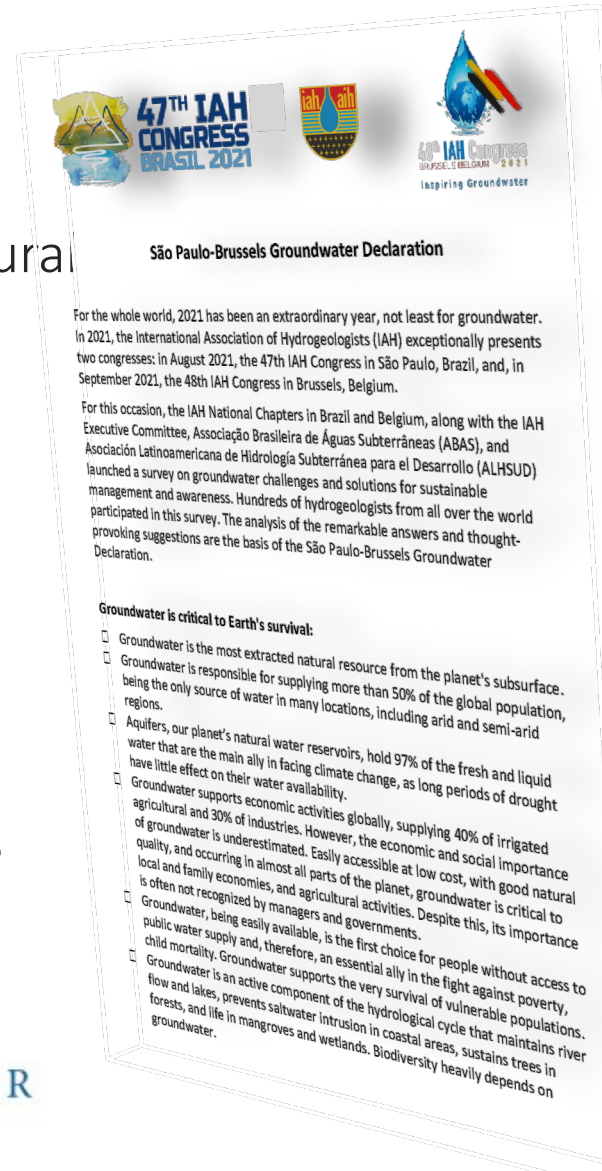
- During 2021, IAH launched a survey on groundwater challenges and solutions for sustainable management and awareness. Answers received by hundreds of IAH members worldwide and related thought-provoking suggestions constituted the basis for the “Sao Paulo-Brussels groundwater declaration”, aimed at facilitating awareness on groundwater among society and non-specialist people
- The Declaration process concluded in Brussels, September 2021, during the IAH official congress, after the preliminary launch in Sao Paulo, August 2021.
- Several activities are correlated to the SDG6 implementation based on the principles of the declaration: IAH groups (e.g. Commissions and Networks), Strategic Overview Papers to communicate with non-experts, and data sharing to favor the inclusion of groundwater information/knowledge in the SDG6 implementation



2a. How the initiative can accelerate progress towards the objectives of the International Water Action Decade and SDG 6



- The “[Sao Paulo-Brussels groundwater declaration](#)” (>1000 signatures) identifies a range of issues hindering groundwater role, across urban and rural areas, and a range of solutions and approaches were put forward. Better political will, and scientific understanding of certain issues will help, but a range of factors must be considered, including local issues and capacity to deal with them.
- The declaration is pointing out the following challenges: i) Groundwater is critical to Earth’s survival; ii) Sustainable groundwater management needs monitoring, regulation, and communication; iii) Strengthen the institutions responsible for the governance to promote efficient, inclusive, ethical, democratic, and socio-ecologically conscientious policies, and iv) to involve governments, hydrogeologists, NGOs, and society to make perceptible this crucial resource for planet



2b. How the initiative can accelerate progress towards the objectives of the International Water Action Decade and SDG 6



- We not only confirm the relevance of groundwater for human development and planetary sustainability, but we moved towards concrete actions, contributing to the acceleration progress of SDG6 implementation, as follow:
- Lack of (quantity and quality) monitoring and lack of communication are the main obstacles to be tackled. Good management must be based on good science.
- We inform the decision-makers and governments that an outdated vision based on “visible infrastructure works” has to be modified to the perception of groundwater and wells relevance.
- We encourage and support policies and regulations adopting a sustainable groundwater management, to address challenges associated with water security and well-being of society



3. Lessons learned and future work required to achieve the objectives of the International Water Action Decade and SDG 6



- All these efforts actively contribute to the achievement of T6.4, where the aquifer overexploitation represents an evident challenge, while T6.3 needs to appropriately consider aquifer vulnerability and monitoring, and T6.6 includes the concept of groundwater dependent ecosystems; last but not least, transboundary aquifer assessment & management is necessary for T6.5
- At Pan-European level, data availability abundance and policy/regulation/governance update (e.g. EU Groundwater Directive) is offering a significant possibility to overcome obstacles to the inclusion of groundwater information/knowledge in the SDG6 implementation, as potential best-practice to be replicated at planetary level.
- Indeed, the IAH primary goal of promoting/sharing knowledge (FAIR principle-based) is now expressed by the “Sao Paulo/Brussels Declaration), communicating these issues to the governance (at various scales) and stimulating coherent reactions



Thank you

(please include your contact information)



Email address: marco.petitta@uniroma1.it



Website: www.iah.org



Twitter: [@iahgroundwater](https://twitter.com/iahgroundwater)



LinkedIn: www.linkedin.com/groups/3213735/

